

SPECIFICATION AMENDMENTS

Please amend the second full paragraph on page 10 as follows:

For polyfluorene and for the monomer and oligomers of the monomer of this polymer, derivatives are defined where R_1 , R_2 , R_3 , R_4 , R_5 , R_6 and R_7 are independently selected from the group consisting of a hydrogen atom or a substituent, such as, for example, alkyl, alkenyl, alkoxy, cycloalkyl, cycloalkenyl, alkanoyl, alkylthio, aryloxy, hydroxy, acyl, acylamino, acyloxy, alkoxy, alkenyl, alkynyl, amino, aminoacyl, aryl, aryloxy, carboxy, carboxyalkyl, cyano, cycloalkyl, guanidino, halo, heteroaryl, heterocyclic, nitro, thiol, thioaryloxy, thioheteroaryloxy and cycloalkyl.

Please amend the second full paragraph on page 15 as follows:

In these experiments, the entire electrochemical cell consists of the polymer fiber (working electrode), a platinum wire (counter electrode), the ionic liquid electrolyte, and the reference electrode. In a typical experiment, ~~the~~ one end of a conjugated polymer fiber was attached to the bottom of the electrochemical cell thereby contacting a platinum plate which formed the potential circuit with the counter electrode, while the other end of the fiber was attached to the cantilever arm (using an epoxy resin) which was situated at the top end of the electrochemical cell. The fiber was always adjusted to exactly 1 cm in length when immersed in the ionic liquid. The Aurora instrument measured both the position of the arm (isotonic mode) under constant load, and the force required to maintain a constant position (isometric mode). In isotonic measurements, a fixed force was applied to the fiber, and then the cantilever arm position displacement was recorded upon electrochemical stimulation. By contrast, in isometric measurements, a fixed length was maintained on the fiber by the cantilever arm, and the electrochemically induced force generated from the fiber was measured.

Please amend the third full paragraph on page 28 as follows:

E. Fabrication of the electrochemical capacitor.

The above two doped gilded polyaniline membranes were then used to fabricate a type I electrochemical capacitor according to FIG. 14_8 hereof by assembling the gilded membranes with the gold layers on the outside. Ionic liquid [BMIM][BF₄] was used as electrolyte and was sandwiched between the two membranes.